

U.S. Census Bureau

**J-8**  
**Data Access and Dissemination System (DADS) II**  
**Proposed Change Management Strategy (CMS)**

Version 1.0

February 15, 2006

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## 1 INTRODUCTION

The Data Access and Dissemination System (DADS) Program is part of the Decennial Systems and Contract Management Office (DSCMO), within the United States Census Bureau. The DADS Program provides tabulation and dissemination services for official demographic and economic information to the Census Bureau.

The DADS Staff has established a Change Management Strategy (CMS) to manage ongoing program, system, and infrastructure changes. The CMS is used to prioritize changes and to examine the impact of the changes to program scope, cost, schedule, and quality. It is also used to ensure effective management of applicable baselines, based on approved changes.

### 1.1 Purpose

The purpose of this CMS document is to describe the overall strategy to managing program, system, and infrastructure changes associated with DADS. This represents the Government's vision on planning, implementing, recording, assessing, and approving changes to the scope, and technical, cost, and schedule baselines of the DADS program. This strategy **shall** be used by the Offeror in developing a change management approach in response to the DADS II solicitation. The strategy **shall** also be used by the Contractor in preparing a change management plan during the base period of the contract.

### 1.2 Scope

The scope of the CMS encompasses the management of planned and unplanned changes to DADS program, system, and infrastructure requirements. Planned changes are compiled by the DADS staff in Performance Work Statements (PWSs), which are released annually to the Contractor prior to the beginning of each contract year. Unplanned changes are not included in PWSs, but rather are released as appropriate during the contract year.

The scope includes the management of the resultant changes to the requirements baseline, software and data release baselines, infrastructure baseline, and contract baseline. It also includes the roles and responsibilities of the Government and the Contractor for managing baseline changes. The CMS applies to DADS Business Operations, DADS Requirements Management, System Life Cycle Management, System Engineering and Architecture, Security, Replacement of DADS Systems, and Program Management.

### 1.3 Audience

The CMS audience includes DADS Staff, Census Bureau stakeholders, and DADS II Offerors and Contractor. The CMS is included as Attachment J-8 in the DADS II solicitation.

### 1.4 Document Organization

The CMS is organized as follows:

- **Section 1, Introduction.** Describes the purpose, scope, audience, and document organization
- **Section 2, Change Management Strategy.** Describes the overall strategy
- **Section 3, Change Management Process Approach.** Describes the approach for each of the change management processes along with their interactions

- **Section 4, References.** Lists applicable reference documents

## 2 CHANGE MANAGEMENT STRATEGY

The DADS Change Management Strategy (CMS) is the overarching framework for managing changes to DADS. The elements of the CMS are:

- Evaluate proposed changes as formal Change Requests (CRs) in accordance with the business needs of the DADS program
- Process CRs for program, system, and infrastructure requirements
- Manage requirement, release, infrastructure and contract baselines as a result of CRs
- Implement changes consistent with an approved system life cycle methodology
- Ensure changes are implemented with minimal impact to program scope, cost schedule and quality
- Maintain traceability of changes throughout the system life cycle
- Ensure coordination and approval of changes between the Government and Contractor.

Note that CRs include planned and unplanned changes that may result from Federal mandates, stakeholder requests, user feedback, and incident reports.

### 2.1 Change Management Processes

The CMS consists of an integrated set of six processes that are used to manage the identification and implementation of changes for the DADS Program. The definitions and goals of the processes are shown in Table 2-1. Additional change management processes may be added in the future based on evolving business needs.

**Table 2-1. Process Definitions and Goals**

Process	Definition	Goals
Requirements Management	Process for prioritizing, analyzing, approving, and baselining requirements	<ul style="list-style-type: none"> <li>• Prioritize and approve CRs</li> <li>• Manage requirements baselines</li> <li>• Maintain traceability throughout the system life cycle</li> </ul>
Release Management	Process for scheduling, approving, and deploying system releases	<ul style="list-style-type: none"> <li>• Define the content of system releases</li> <li>• Schedule and approve releases for deployment</li> <li>• Manage release baselines</li> </ul>
Infrastructure Management	Process for administering and maintaining the DADS infrastructure	<ul style="list-style-type: none"> <li>• Provide a stable infrastructure, (e.g., server and network hardware, operating system and COTS software)</li> <li>• Manage infrastructure baselines</li> </ul>
Configuration Management	Process for managing system and infrastructure configuration items (CIs)	<ul style="list-style-type: none"> <li>• Manage system release and infrastructure CIs</li> <li>• Manage related system and infrastructure documentation</li> <li>• Identify and resolve configuration issues</li> </ul>
Incident Management	Process for responding to incidents and restoring operational capability	<ul style="list-style-type: none"> <li>• Respond to incidents in a timely manner</li> <li>• Maintain optimum levels of service quality and availability</li> <li>• Prevent and correct system and infrastructure defects</li> </ul>
Contract Management	Process for managing changes to the contract baseline	<ul style="list-style-type: none"> <li>• Prepare planned and unplanned contract changes</li> <li>• Prepare Memoranda of Understanding (MOUs) as needed</li> <li>• Manage contract baselines</li> </ul>

## 2.2 Change Management Board

DADS has established a Change Control Board (CCB) staffed by government personnel to manage the reviews and approvals of CRs. The CCB reviews and filters CRs based on priority, importance, and funding availability. The CCB also approves, rejects, or defers CRs based on feasibility and impact. Additional change management boards may be added in the future based on evolving business needs.

## 2.3 Change Management Databases

The change management databases and their usage are presented in Table 2-2.

**Table 2-2. CMS Databases**

Tool	Usage
Requirements Database (RDB)	<ul style="list-style-type: none"> <li>• Manages changes to the requirements baseline</li> <li>• Contains templates to record and track CRs</li> <li>• Contains CR log</li> </ul>
Release Management Database (RMDb)	<ul style="list-style-type: none"> <li>• Records configuration items based on release changes</li> <li>• Tracks all configuration items, including software code, data, and documentation</li> </ul>
Infrastructure Management Database (IMDB)	<ul style="list-style-type: none"> <li>• Records configuration items based on infrastructure changes</li> <li>• Records and track all configuration items, including hardware and COTS software configuration files, data, and documentation</li> </ul>
Incident Database (IDB)	<ul style="list-style-type: none"> <li>• Records and track incidents (including problems)</li> <li>• Evaluates incidents that may necessitate CRs</li> </ul>

## 3 CHANGE MANAGEMENT PROCESS APPROACH

The change management processes are described in terms of their inputs, activities, outputs, and interactions. The relationships among the processes are also described. Note that the activities reflect the responsibilities of the Government and the Contractor.

### 3.1 Requirements Management

The requirements management process is described in Table 3-1.

**Table 3-1. Requirements Management Approach**

Element	Details	
Inputs	<ul style="list-style-type: none"> <li>• CRs (Program, System, Infrastructure)</li> <li>• Requirements baseline</li> <li>• Contract baseline</li> <li>• Incident database</li> </ul>	
Activities	Government	Contractor
	<ul style="list-style-type: none"> <li>• Prioritize CRs</li> <li>• Analyze technical impacts               <ul style="list-style-type: none"> <li>- Request analysis from Contractor</li> <li>- Review technical and cost proposals</li> </ul> </li> <li>• Approve CRs via the CCB</li> <li>• Update requirements baseline</li> </ul>	<ul style="list-style-type: none"> <li>• Analyze impact to scope, cost, schedule, and quality</li> <li>• Prepare technical and cost proposals</li> <li>• Update requirements documents</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• Approved CRs</li> <li>• Technical and cost proposals</li> <li>• Updated requirements baseline</li> <li>• Updated Requirements Traceability Matrix</li> <li>• Updated System Requirements Specification</li> </ul>	
Interactions	<ul style="list-style-type: none"> <li>• Accept changes from Contract Management</li> <li>• Accept incidents from Incident Management</li> <li>• Allocate program and system CRs to DADS releases via Release Management</li> <li>• Allocate infrastructure CRs to DADS infrastructure via Infrastructure Management</li> <li>• Apply approved CRs to update contract baseline via Contract Management</li> </ul>	

### 3.2 Release Management

The release management process is described in Table 3-2.

**Table 3-2. Release Management Approach**

Element	Details	
Inputs	<ul style="list-style-type: none"> <li>• Approved CRs (program and system)</li> <li>• Updated requirements baseline</li> <li>• Release baseline</li> </ul>	
Activities	Government	Contractor
	<ul style="list-style-type: none"> <li>• Schedule releases for deployment</li> <li>• Allocate CRs to releases</li> <li>• Approve releases (content &amp; deployment)</li> <li>• Oversee contractor activities</li> </ul>	<ul style="list-style-type: none"> <li>• Build releases</li> <li>• Deploy releases</li> <li>• Update configuration items (CIs) (e.g., code and data files, documentation)</li> <li>• Prepare release documents</li> <li>• Conduct user training, as needed</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• Updated release baseline (including CIs)</li> <li>• A plan to describe the planning, schedule, and content for a system or data release</li> <li>• A plan to describe the distribution and installation activities and responsibilities; deployment checklist; dependencies; and documentation for a system or data release. May include details on user training</li> </ul>	
Interactions	<ul style="list-style-type: none"> <li>• Receive approved CRs from Requirements Management</li> <li>• Place releases under configuration control via Configuration Management</li> </ul>	

### 3.3 Infrastructure Management

The infrastructure management process is described in Table 3-3.

**Table 3-3. Infrastructure Management Approach**

Element	Details	
Inputs	<ul style="list-style-type: none"> <li>• Approved CRs (infrastructure)</li> <li>• Updated requirements baseline</li> <li>• Infrastructure baseline</li> </ul>	
Activities	Government	Contractor
	<ul style="list-style-type: none"> <li>• Allocate CRs to DADS infrastructure</li> <li>• Approve infrastructure changes and deployment</li> <li>• Schedule infrastructure deployment</li> <li>• Oversee contractor activities</li> </ul>	<ul style="list-style-type: none"> <li>• Build infrastructure changes (e.g., procure and install component upgrades)</li> <li>• Deploy infrastructure changes</li> <li>• Update CIs (e.g., servers, operating system files, documentation)</li> <li>• Prepare infrastructure documents</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• Updated infrastructure baseline (including CIs)</li> <li>• Infrastructure design to document the design changes to the infrastructure</li> <li>• A plan for the operations, maintenance and upgrade of the infrastructure</li> <li>• A plan to describe the distribution and installation activities and responsibilities; deployment checklist; dependencies; and documentation for infrastructure changes</li> <li>• Software licenses and maintenance agreements</li> </ul>	
Interactions	<ul style="list-style-type: none"> <li>• Receive approved CRs from Requirements Management</li> <li>• Place infrastructure changes under configuration control via Configuration Management</li> </ul>	

### 3.4 Configuration Management

The configuration management process is described in Table 3-4.

**Table 3-4. Configuration Management Approach**

Element	Details	
Inputs	<ul style="list-style-type: none"> <li>• Updated release baseline (including CIs)</li> <li>• Updated infrastructure baseline (including CIs)</li> </ul>	
Activities	Government	Contractor
	<ul style="list-style-type: none"> <li>• Conduct reviews and audits to verify accuracy and completeness of CIs</li> <li>• Oversee contractor activities</li> </ul>	<ul style="list-style-type: none"> <li>• Identify applicable CIs for hardware, software, data, and documentation</li> <li>• Record CIs (release and infrastructure)</li> <li>• Prepare configuration documents</li> <li>• Track the relationship of CIs to releases</li> <li>• Report status information on all current and historical CIs</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• A plan to detail the scope, objectives, roles and responsibilities, policies, and procedures of the configuration management process</li> <li>• A report to present current and historical data concerning each CI</li> <li>• Audit reports</li> </ul>	
Interactions	<ul style="list-style-type: none"> <li>• Record CIs from Release Management and Infrastructure Management</li> </ul>	

### 3.5 Incident Management

The incident management process is described in Table 3-5. A DADS incident is defined as any problem (e.g., server failure, data issue) that affects the system operation or prevents the system from satisfying the DADS requirements.

**Table 3-5. Incident Management Approach**

Element	Details	
Inputs	• Incidents or problems	
Activities	Government	Contractor
	<ul style="list-style-type: none"> <li>• Identify incidents</li> <li>• Record incidents</li> <li>• Oversee contractor activities</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and diagnose defects</li> <li>• Resolve root causes of defects before incidents occur</li> <li>• Troubleshoot and resolve incidents in a timely manner</li> <li>• Notify affected parties</li> <li>• Conduct and report on trend analyses</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• Incident reports</li> <li>• Reports to document and analyze trends and present recommendations</li> <li>• CRs derived from incidents or problems</li> </ul>	
Interactions	• Analyses of incidents or problems may trigger CRs for Requirements Management	

### 3.6 Contract Management

The contract management process is described in Table 3-6. The process describes how contract modifications are managed based on planned and unplanned changes to the program scope, cost, and schedule. Contract modifications are issued as a result of new CRs, derived from engineering changes, budget adjustments, Government mandates, and Contractor performance.

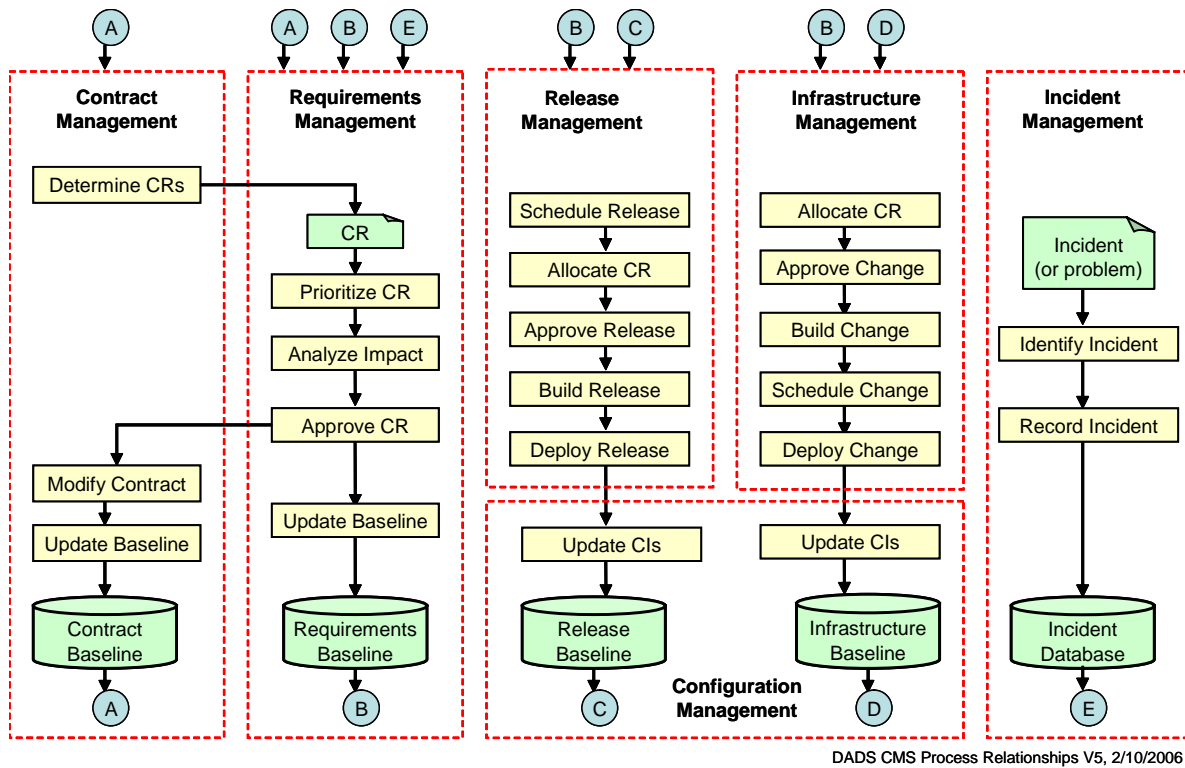
**Table 3-6. Contract Management Approach**

Element	Details	
Inputs	<ul style="list-style-type: none"> <li>• Contract changes (e.g., engineering, budget, stakeholder request, mandate)</li> <li>• Contract baseline</li> </ul>	
Activities	Government	Contractor
	<ul style="list-style-type: none"> <li>• Determine CRs <ul style="list-style-type: none"> <li>- Initiate CRs from among DADS Staff</li> <li>- Receive CRs from Government</li> <li>- Solicit CRs from Contractor</li> </ul> </li> <li>• Issue contract modifications based on CRs</li> <li>• Update contract baseline</li> <li>• Prepare Memoranda of Understanding (MOUs) as needed</li> </ul>	<ul style="list-style-type: none"> <li>• Propose engineering changes as CRs <ul style="list-style-type: none"> <li>- Respond to DADS requests</li> <li>- Propose changes independently</li> </ul> </li> <li>• Update program management plans</li> </ul>
Outputs	<ul style="list-style-type: none"> <li>• Contract modifications (including annual PWSs)</li> <li>• Updated contract baseline</li> <li>• MOUs</li> <li>• Program management plans</li> </ul>	
Interactions	<ul style="list-style-type: none"> <li>• Contract changes trigger CRs to Requirements Management</li> <li>• Receive changes as the result of approved CRs from Requirements Management</li> </ul>	

### **3.7 Change Management Process Relationships**

Figure 3-1 depicts the relationships among the change management processes. The DADS program baselines (contract, requirements, release, and infrastructure) are highlighted as the primary inputs to the processes. The incident database is also highlighted as an input to the requirements management process.

Each process accepts the baseline inputs as well as the planned or unplanned changes. The appropriate activities for each process are then conducted by the Government and the Contractor. Finally, the processed changes are used to update the respective baselines, which are recorded in the databases.



**Figure 3-1. Change Management Process Relationships**

#### 4 REFERENCES

The following references were used to prepare the CMS.

- DADS System Requirements Document (SRD)
- DADS Requirements Management Plan (RMP)
- Information Technology Infrastructure Library (ITIL) Best Practices for Service Management, Office of Government Commerce (OGC), United Kingdom, 2000.
- Information Technology Infrastructure Library (ITIL) ICT Infrastructure Management, 2002.

Note: ITIL is an industry framework for managing information technology changes.